



SEQUENCE LISTING

C 40

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<120> CONJUGATES OF SOLUBLE PEPTIDIC COMPOUNDS WITH  
MEMBRANE-BINDING AGENTS

<130> 37945-0004

<140> US 09/612,314  
<141> 2000-07-07

<150> US 09/214,913  
<151> 1999-03-16

<150> PCT/EP97/03715  
<151> 1997-07-08

<150> GB 96 148 71.3  
<151> 1996-07-15

<160> 53

<170> PatentIn Ver. 2.1

<210> 1  
<211> 37  
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<220>  
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oligonucleotide

<400> 1  
gcaccgcagt gcatcatccc gaacaaatgc taataaa 37

<210> 2  
<211> 37  
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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 2  
agcttttatt agcatttggt cgggatgatg cactgcg 37

<210> 3  
<211> 85  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 3

gcaccgcagt gcatcatccc gaacaaagac ggtccgaaaa agaagaaaaa gaaatctccg 60  
tccaaatctt ccggttgcta ataaa 85

<210> 4

<211> 85

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 4

agcttttatt agcaaccgga agatttggac ggagatttct ttttcttctt tttcggaccg 60  
tctttgttcg ggatgatgca ctgcg 85

<210> 5

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide used  
to synthesize MSWP-1

<220>

<223> c-term amidation

<400> 5

Gly Ser Ser Lys Ser Pro Ser Lys Lys Lys Lys Lys Lys Pro Gly Asp  
1 5 10 15

Cys

<210> 6

<211> 198

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: [SCR1-3]-Cys protein

<400> 6

Met Gln Cys Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn  
1 5 10 15

Leu Thr Asp Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu  
20 25 30

Cys Arg Pro Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys  
           35                                  40                                  45  
 Asn Ser Val Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys  
           50                                  55                                  60  
 Arg Asn Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Lys Gly  
           65                                  70                                  75                                  80  
 Ile Gln Phe Gly Ser Gln Ile Lys Tyr Ser Cys Thr Lys Gly Tyr Arg  
                                   85                                  90                                  95  
 Leu Ile Gly Ser Ser Ser Ala Thr Cys Ile Ile Ser Gly Asp Thr Val  
                                   100                                  105                                  110  
 Ile Trp Asp Asn Glu Thr Pro Ile Cys Asp Arg Ile Pro Cys Gly Leu  
                                   115                                  120                                  125  
 Pro Pro Thr Ile Thr Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn  
           130                                  135                                  140  
 Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly  
           145                                  150                                  155                                  160  
 Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr  
                                   165                                  170                                  175  
 Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys  
                                   180                                  185                                  190  
 Ile Ile Pro Asn Lys Cys  
           195

<210> 7

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: [SCR1-3]/switch fusion protein

<400> 7

Met Gln Cys Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn  
           1                                  5                                  10                                  15  
 Leu Thr Asp Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu  
                                   20                                  25                                  30  
 Cys Arg Pro Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys  
           35                                  40                                  45  
 Asn Ser Val Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys  
           50                                  55                                  60  
 Arg Asn Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Lys Gly  
           65                                  70                                  75                                  80

Ile Gln Phe Gly Ser Gln Ile Lys Tyr Ser Cys Thr Lys Gly Tyr Arg  
                                     85                                    90                                    95  
 Leu Ile Gly Ser Ser Ala Thr Cys Ile Ile Ser Gly Asp Thr Val  
                                     100                                    105                                    110  
 Ile Trp Asp Asn Glu Thr Pro Ile Cys Asp Arg Ile Pro Cys Gly Leu  
                                     115                                    120                                    125  
 Pro Pro Thr Ile Thr Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn  
                                     130                                    135                                    140  
 Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly  
                                     145                                    150                                    155                                    160  
 Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr  
                                     165                                    170                                    175  
 Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys  
                                     180                                    185                                    190  
 Ile Ile Pro Asn Lys Asp Gly Pro Lys Lys Lys Lys Lys Lys Ser Pro  
                                     195                                    200                                    205  
 Ser Lys Ser Ser Gly Cys  
                                     210

<210> 8  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino  
                                     acid sequence

<400> 8  
 Asp Gly Pro Lys Lys Lys Lys Lys Lys Ser Pro Ser Lys Ser Ser Gly  
     1                                    5                                    10                                    15

<210> 9  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino  
                                     acid sequence

<400> 9  
 Gly Ser Ser Lys Ser Pro Ser Lys Lys Lys Lys Lys Lys Pro Gly Asp  
     1                                    5                                    10                                    15

<210> 10  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 10  
 Ser Pro Ser Asn Glu Thr Pro Lys Lys Lys Lys Lys Arg Phe Ser Phe  
           1                  5                  10                  15  
 Lys Lys Ser Gly  
                   20

<210> 11  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 11  
 Asp Gly Pro Lys Lys Lys Lys Lys Lys Ser Pro Ser Lys Ser Ser Lys  
           1                  5                  10                  15

<210> 12  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 12  
 Ser Lys Asp Gly Lys Lys Lys Lys Lys Lys Ser Lys Thr Lys  
           1                  5                  10

<210> 13  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 13  
 Gly Arg Gly Asp Ser Pro  
           1                  5

<210> 14  
 <211> 209  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SCR1-3 with  
 the c-terminal amino acids N195 and K196 replaced  
 by a 14 amino acid peptide

<400> 14

Met	Gln	Cys	Asn	Ala	Pro	Glu	Trp	Leu	Pro	Phe	Ala	Arg	Pro	Thr	Asn
1				5					10					15	
Leu	Thr	Asp	Glu	Phe	Glu	Phe	Pro	Ile	Gly	Thr	Tyr	Leu	Asn	Tyr	Glu
			20					25					30		
Cys	Arg	Pro	Gly	Tyr	Ser	Gly	Arg	Pro	Phe	Ser	Ile	Ile	Cys	Leu	Lys
		35					40					45			
Asn	Ser	Val	Trp	Thr	Gly	Ala	Lys	Asp	Arg	Cys	Arg	Arg	Lys	Ser	Cys
	50					55					60				
Arg	Asn	Pro	Pro	Asp	Pro	Val	Asn	Gly	Met	Val	His	Val	Ile	Lys	Gly
	65				70					75					80
Ile	Gln	Phe	Gly	Ser	Gln	Ile	Lys	Tyr	Ser	Cys	Thr	Lys	Gly	Tyr	Arg
				85				90						95	
Leu	Ile	Gly	Ser	Ser	Ala	Thr	Cys	Ile	Ile	Ser	Gly	Asp	Thr	Val	
		100					105					110			
Ile	Trp	Asp	Asn	Glu	Thr	Pro	Ile	Cys	Asp	Arg	Ile	Pro	Cys	Gly	Leu
	115						120					125			
Pro	Pro	Thr	Ile	Thr	Asn	Gly	Asp	Phe	Ile	Ser	Thr	Asn	Arg	Glu	Asn
	130					135					140				
Phe	His	Tyr	Gly	Ser	Val	Val	Thr	Tyr	Arg	Cys	Asn	Pro	Gly	Ser	Gly
145					150					155					160
Gly	Arg	Lys	Val	Phe	Glu	Leu	Val	Gly	Glu	Pro	Ser	Ile	Tyr	Cys	Thr
			165					170						175	
Ser	Asn	Asp	Asp	Gln	Val	Gly	Ile	Trp	Ser	Gly	Pro	Ala	Pro	Gln	Cys
		180						185					190		
Ile	Ile	Pro	Thr	Asn	Ala	Asn	Lys	Ser	Leu	Ser	Ser	Ile	Ser	Cys	Gln
		195					200						205		

Thr

<210> 15  
 <211> 53  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 15

ctggagcggg cccgcaccgc agtgcacatc cccgaacaaa tgctaataaa agc 53

<210> 16

<211> 53

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 16

gcttttatta gcatttggtc gggatgatgc actgcggtgc gggccccgctc cag 53

<210> 17

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative amino  
acid sequence

<400> 17

Asp	Gly	Pro	Ser	Glu	Ile	Leu	Arg	Gly	Asp	Phe	Ser	Ser
1					5				10			

<210> 18

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide used  
to generate MSWP-2

<220>

<223> c-term amidation

<400> 18

Cys	Asp	Gly	Pro	Lys	Lys	Lys	Lys	Lys	Ser	Pro	Ser	Lys	Ser	Ser
1				5				10					15	

Lys

<210> 19

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide used to generate MSWP-3

<400> 19

Ser Lys Asp Gly Lys Lys Lys Lys Lys Ser Lys Thr Lys Cys  
1 5 10 15

<210> 20

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide used to generate TCTP-1

<400> 20

Cys Ser Ala Ala Pro Ser Ser Gly Phe Arg Ile Leu Leu Leu Lys Val  
1 5 10 15

<210> 21

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 21

Gly Asn Glu Gln Ser Phe Arg Val Asp Leu Arg Thr Leu Leu Arg Tyr  
1 5 10 15

Ala

<210> 22

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative amino acid sequence

<400> 22

Gly Phe Arg Ile Leu Leu Leu Lys Val  
1 5

<210> 23

<211> 211



<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SCR1-3 with an additional 14 amino acid residues at the c-terminus

<400> 23

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Met Gln Cys Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn
 1              5              10              15

Leu Thr Asp Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu
          20              25              30

Cys Arg Pro Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys
          35              40              45

Asn Ser Val Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys
 50              55              60

Arg Asn Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Lys Gly
 65              70              75              80

Ile Gln Phe Gly Ser Gln Ile Lys Tyr Ser Cys Thr Lys Gly Tyr Arg
          85              90              95

Leu Ile Gly Ser Ser Ser Ala Thr Cys Ile Ile Ser Gly Asp Thr Val
          100              105              110

Ile Trp Asp Asn Glu Thr Pro Ile Cys Asp Arg Ile Pro Cys Gly Leu
          115              120              125

Pro Pro Thr Ile Thr Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn
          130              135              140

Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly
          145              150              155              160

Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr
          165              170              175

Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys
          180              185              190

Ile Ile Pro Asn Lys Asp Gly Pro Ser Glu Ile Leu Arg Gly Asp Phe
          195              200              205

Ser Ser Cys
          210

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<210> 24

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative amino

## acid sequence

&lt;400&gt; 24

Ser Ala Ala Pro Ser Ser Gly Phe Arg Ile Leu Leu Leu Lys Val  
 1 5 10 15

&lt;210&gt; 25

&lt;211&gt; 72

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide

&lt;400&gt; 25

cgcaccgcag tgcacatcc cgaacaaaga tggcccgagc gaaattctgc gtggcgattt 60  
 tagcagctgc ta 72

&lt;210&gt; 26

&lt;211&gt; 80

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide

&lt;400&gt; 26

acgttagcag ctgctaaaat cgccacgcag aatttcgctc gggccatctt tgttcgggat 60  
 gatgcactgc ggtgcgggcc 80

&lt;210&gt; 27

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Myristoyl/Electrostatic  
 Swith Peptide Reagent 1 (MSWP-1)

&lt;220&gt;

&lt;223&gt; c-term amidation

&lt;400&gt; 27

Gly Ser Ser Lys Ser Pro Ser Lys Lys Lys Lys Lys Lys Pro Gly Asp  
 1 5 10 15

Cys

&lt;210&gt; 28

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

<220>

<223> Description of Artificial Sequence: Myristoyl/Electrostatic  
Switch Peptide Reagent 2 (MSWP-2)

<220>

<223> c-term amidation

<400> 28

Cys Asp Gly Pro Lys Lys Lys Lys Lys Lys Ser Pro Ser Lys Ser Ser  
1 5 10 15

Lys

<210> 29

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Myristoyl/Electrostatic  
Switch Peptide Reagent 3 (MSWP-3)

<220>

<223> c-term amidation

<400> 29

Ser Lys Asp Gly Lys Lys Lys Lys Lys Lys Ser Lys Thr Lys Cys  
1 5 10 15

<210> 30

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: T-cell targeting peptide  
reagent 1 (TCTP-1)

<400> 30

Cys Ser Ala Ala Pro Ser Ser Gly Phe Arg Ile Leu Leu Leu Lys Val  
1 5 10 15

<210> 31

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: [SCR1-3/switch  
fusion]-[MAET]

<220>

<223> c-term Cys is linked to (CH<sub>2</sub>)<sub>2</sub>-CONH-(CH<sub>2</sub>)<sub>12</sub>-CH<sub>3</sub>

&lt;400&gt; 31

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Met Gln Cys Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn
 1           5           10           15

Leu Thr Asp Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu
          20           25           30

Cys Arg Pro Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys
          35           40           45

Asn Ser Val Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys
 50           55           60

Arg Asn Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Lys Gly
 65           70           75           80

Ile Gln Phe Gly Ser Gln Ile Lys Tyr Ser Cys Thr Lys Gly Tyr Arg
          85           90           95

Leu Ile Gly Ser Ser Ser Ala Thr Cys Ile Ile Ser Gly Asp Thr Val
          100          105          110

Ile Trp Asp Asn Glu Thr Pro Ile Cys Asp Arg Ile Pro Cys Gly Leu
          115          120          125

Pro Pro Thr Ile Thr Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn
          130          135          140

Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly
          145          150          155          160

Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr
          165          170          175

Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys
          180          185          190

Ile Ile Pro Asn Lys Asp Gly Pro Lys Lys Lys Lys Lys Lys Ser Pro
          195          200          205

Ser Lys Ser Ser Gly Cys
          210

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&lt;210&gt; 32

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Illustrative amino acid sequence

&lt;400&gt; 32

```

Ala Ala Pro Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala
 1           5           10           15

```

Gly

<210> 33  
 <211> 215  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SCR1-3 with an additional c-terminal 18 amino acids

<400> 33

Met	Gln	Cys	Asn	Ala	Pro	Glu	Trp	Leu	Pro	Phe	Ala	Arg	Pro	Thr	Asn	1	5	10	15
Leu	Thr	Asp	Glu	Phe	Glu	Phe	Pro	Ile	Gly	Thr	Tyr	Leu	Asn	Tyr	Glu	20	25	30	
Cys	Arg	Pro	Gly	Tyr	Ser	Gly	Arg	Pro	Phe	Ser	Ile	Ile	Cys	Leu	Lys	35	40	45	
Asn	Ser	Val	Trp	Thr	Gly	Ala	Lys	Asp	Arg	Cys	Arg	Arg	Lys	Ser	Cys	50	55	60	
Arg	Asn	Pro	Pro	Asp	Pro	Val	Asn	Gly	Met	Val	His	Val	Ile	Lys	Gly	65	70	75	80
Ile	Gln	Phe	Gly	Ser	Gln	Ile	Lys	Tyr	Ser	Cys	Thr	Lys	Gly	Tyr	Arg	85	90	95	
Leu	Ile	Gly	Ser	Ser	Ala	Thr	Cys	Ile	Ile	Ser	Gly	Asp	Thr	Val	100	105	110		
Ile	Trp	Asp	Asn	Glu	Thr	Pro	Ile	Cys	Asp	Arg	Ile	Pro	Cys	Gly	Leu	115	120	125	
Pro	Pro	Thr	Ile	Thr	Asn	Gly	Asp	Phe	Ile	Ser	Thr	Asn	Arg	Glu	Asn	130	135	140	
Phe	His	Tyr	Gly	Ser	Val	Val	Thr	Tyr	Arg	Cys	Asn	Pro	Gly	Ser	Gly	145	150	155	160
Gly	Arg	Lys	Val	Phe	Glu	Leu	Val	Gly	Glu	Pro	Ser	Ile	Tyr	Cys	Thr	165	170	175	
Ser	Asn	Asp	Asp	Gln	Val	Gly	Ile	Trp	Ser	Gly	Pro	Ala	Pro	Gln	Cys	180	185	190	
Ile	Ile	Pro	Asn	Lys	Ala	Ala	Pro	Ser	Val	Ile	Gly	Phe	Arg	Ile	Leu	195	200	205	
Leu	Leu	Lys	Val	Ala	Gly	Cys	210	215											

<210> 34  
 <211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 34

cgccaccgag tgcacatcc cgaacaaagc ggcccccagc gtgattggct tccgtattct 60  
gctgctgaaa gtggcgggct gcta 84

<210> 35

<211> 92

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 35

agcttagcag cccgccactt tcagcagcag aatacggag ccaatcacgc tgggcgccgc 60  
tttgctcggg atgatgcact gcggtgcggg cc 92

<210> 36

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative amino  
acid sequence

<400> 36

Asp	Gly	Pro	Lys	Lys	Lys	Lys	Lys	Ser	Pro	Ser	Lys	Ser	Ser	Gly
1				5				10				15		

Cys

<210> 37

<211> 77

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic protein APT631

<400> 37

Leu	Gln	Cys	Tyr	Asn	Cys	Pro	Asn	Pro	Thr	Ala	Asp	Cys	Lys	Thr	Ala
1				5					10				15		

Val	Asn	Cys	Ser	Ser	Asp	Phe	Asp	Ala	Cys	Leu	Ile	Thr	Lys	Ala	Gly
				20				25					30		

Leu Gln Val Tyr Asn Lys Cys Trp Lys Phe Glu His Cys Asn Phe Asn  
           35                          40                          45

Asp Val Thr Thr Arg Leu Arg Glu Asn Glu Leu Thr Tyr Tyr Cys Cys  
           50                          55                          60

Lys Lys Asp Leu Cys Asn Phe Asn Glu Gln Leu Glu Asn  
       65                          70                          75

<210> 38

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic protein APT542

<220>

<223> c-term amidation

<400> 38

Gly Ser Ser Lys Ser Pro Ser Lys Lys Lys Lys Lys Lys Pro Gly Asp  
       1                          5                          10                          15

Cys

<210> 39

<211> 70

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic protein APT634

<400> 39

Leu Gln Cys Tyr Asn Cys Pro Asn Pro Thr Ala Asp Cys Lys Thr Ala  
       1                          5                          10                          15

Val Ala Cys Ser Ser Asp Phe Asp Ala Cys Leu Ile Thr Lys Ala Gly  
           20                          25                          30

Leu Gln Val Tyr Asn Lys Cys Trp Lys Phe Glu His Cys Asn Phe Asn  
           35                          40                          45

Asp Val Thr Thr Arg Leu Arg Glu Asn Glu Leu Thr Tyr Tyr Cys Cys  
           50                          55                          60

Lys Lys Asp Leu Cys Asn  
       65                          70

<210> 40

<211> 82

<212> PRT

<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic protein APT2060

&lt;400&gt; 40

Leu Gln Cys Tyr Asn Cys Pro Asn Pro Thr Ala Asp Cys Lys Thr Ala  
 1 5 10 15

Val Asn Cys Ser Ser Asp Phe Asp Ala Cys Leu Ile Thr Lys Ala Gly  
 20 25 30

Leu Gln Val Tyr Asn Lys Cys Trp Lys Phe Glu His Cys Asn Phe Asn  
 35 40 45

Asp Val Thr Thr Arg Leu Arg Glu Asn Glu Leu Thr Tyr Tyr Cys Cys  
 50 55 60

Lys Lys Asp Leu Cys Asn Phe Asn Glu Gln Leu Glu Asn Gly Gly Thr  
 65 70 75 80

Ser Cys

&lt;210&gt; 41

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic protein APT635

&lt;400&gt; 41

Met Leu Gln Cys Tyr Asn Cys Pro Asn Pro Thr Ala Asp Cys Lys Thr  
 1 5 10 15

Ala Val Asn Cys Ser Ser Asp Phe Asp Ala Cys Leu Ile Thr Lys Ala  
 20 25 30

Gly Leu Gln Val Tyr Asn Lys Cys Trp Lys Phe Glu His Cys Asn Phe  
 35 40 45

Asn Asp Val Thr Thr Arg Leu Arg Glu Asn Glu Leu Thr Tyr Tyr Cys  
 50 55 60

Cys Lys Lys Asp Leu Cys Asn Phe Asn Glu Gln Leu Glu Asn Gly Gly  
 65 70 75 80

Thr Ser Cys

&lt;210&gt; 42

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic protein APT2061



&lt;400&gt; 42

Leu Gln Cys Tyr Asn Cys Pro Asn Pro Thr Ala Asp Cys Lys Thr Ala  
 1 5 10 15

Val Ala Cys Ser Ser Asp Phe Asp Ala Cys Leu Ile Thr Lys Ala Gly  
 20 25 30

Leu Gln Val Tyr Asn Lys Cys Trp Lys Phe Glu His Cys Asn Phe Asn  
 35 40 45

Asp Val Thr Thr Arg Leu Arg Glu Asn Glu Leu Thr Tyr Tyr Cys Cys  
 50 55 60

Lys Lys Asp Leu Cys Asn Cys  
 65 70

&lt;210&gt; 43

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Illustrative amino acid sequence

&lt;400&gt; 43

Ala Ala Pro Ser Val Ile Gly Phe Arg Ile Leu Leu Leu Lys Val Ala  
 1 5 10 15

Gly Cys

&lt;210&gt; 44

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Illustrative amino acid sequence

&lt;400&gt; 44

Asp Gly Pro Ser Glu Ile Leu Arg Gly Asp Phe Ser Ser Cys  
 1 5 10

&lt;210&gt; 45

&lt;211&gt; 36

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Illustrative oligonucleotide

&lt;400&gt; 45

cctctggcca aatgtacctc tcgtgcacat tgctga

<210> 46  
 <211> 211  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic protein APT2057

<400> 46  
 Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro  
   1                  5                  10                  15  
 Arg Gly Ser His Met Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala  
                   20                  25                  30  
 Ser Leu Lys Gln Pro Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr  
           35                  40                  45  
 Val Val Glu Tyr Glu Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu  
   50                  55                  60  
 Ser Pro Lys Leu Thr Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val  
   65                  70                  75                  80  
 Glu Phe Cys Lys Lys Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn  
                   85                  90                  95  
 Gly Gln Ile Asp Val Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser  
                   100                  105                  110  
 Phe Ser Cys Asn Thr Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe  
           115                  120                  125  
 Cys Leu Ile Ser Gly Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu  
   130                  135                  140  
 Cys Arg Glu Ile Tyr Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile  
   145                  150                  155                  160  
 Ile Gln Gly Glu Arg Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr  
                   165                  170                  175  
 Ala Cys Asn Lys Gly Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys  
           180                  185                  190  
 Thr Val Asn Asn Asp Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys  
   195                  200                  205  
 Arg Gly Cys  
   210

<210> 47  
 <211> 274  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic protein APT2058

&lt;400&gt; 47

```

Met Gly Ser Ser His His His His His His Ser Ser Gly Leu Val Pro
 1           5           10           15

Arg Gly Ser His Met Gln Asp Cys Gly Leu Pro Pro Asp Val Pro Asn
          20           25           30

Ala Gln Pro Ala Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val
          35           40           45

Ile Thr Tyr Lys Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys
          50           55           60

Asp Ser Val Ile Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu
          65           70           75           80

Phe Cys Asn Arg Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser
          85           90           95

Leu Lys Gln Pro Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val
          100          105          110

Val Glu Tyr Glu Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser
          115          120          125

Pro Lys Leu Thr Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val Glu
          130          135          140

Phe Cys Lys Lys Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn Gly
          145          150          155          160

Gln Ile Asp Val Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser Phe
          165          170          175

Ser Cys Asn Thr Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe Cys
          180          185          190

Leu Ile Ser Gly Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu Cys
          195          200          205

Arg Glu Ile Tyr Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile
          210          215          220

Gln Gly Glu Arg Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala
          225          230          235          240

Cys Asn Lys Gly Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr
          245          250          255

Val Asn Asn Asp Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Arg
          260          265          270

Gly Cys

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<210> 48  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic leader  
 sequence

<400> 48  
 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro  
           1                  5                  10                  15  
 Arg Gly Ser His  
                   20

<210> 49  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer DAF-R

<400> 49  
 ggaattctaa gtcagcaagc ccatgggttac t 31

<210> 50  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide DAF-F

<400> 50  
 gcatatgacc gtcgcgcggc cgagc 25

<210> 51  
 <211> 527  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> tissue plasminogen activator

<400> 51  
 Ser Tyr Gln Val Ile Cys Arg Asp Glu Lys Thr Gln Met Ile Tyr Gln  
           1                  5                  10                  15  
 Gln His Gln Ser Trp Leu Arg Pro Val Leu Arg Ser Asn Arg Val Glu  
                   20                  25                  30

Tyr	Cys	Trp	Cys	Asn	Ser	Gly	Arg	Ala	Gln	Cys	His	Ser	Val	Pro	Val
		35					40					45			
Lys	Ser	Cys	Ser	Glu	Pro	Arg	Cys	Phe	Asn	Gly	Gly	Thr	Cys	Gln	Gln
	50					55					60				
Ala	Leu	Tyr	Phe	Ser	Asp	Phe	Val	Cys	Gln	Cys	Pro	Glu	Gly	Phe	Ala
65					70					75					80
Gly	Lys	Cys	Cys	Glu	Ile	Asp	Thr	Arg	Ala	Thr	Cys	Tyr	Glu	Asp	Gln
				85					90					95	
Gly	Ile	Ser	Tyr	Arg	Gly	Thr	Trp	Ser	Thr	Ala	Glu	Ser	Gly	Ala	Glu
			100					105					110		
Cys	Thr	Asn	Trp	Asn	Ser	Ser	Ala	Leu	Ala	Gln	Lys	Pro	Tyr	Ser	Gly
		115					120					125			
Arg	Arg	Pro	Asp	Ala	Ile	Arg	Leu	Gly	Leu	Gly	Asn	His	Asn	Tyr	Cys
	130					135					140				
Arg	Asn	Pro	Asp	Arg	Asp	Ser	Lys	Pro	Trp	Cys	Tyr	Val	Phe	Lys	Ala
145					150					155					160
Gly	Lys	Tyr	Ser	Ser	Glu	Phe	Cys	Ser	Thr	Pro	Ala	Cys	Ser	Glu	Gly
				165					170					175	
Asn	Ser	Asp	Cys	Tyr	Phe	Gly	Asn	Gly	Ser	Ala	Tyr	Arg	Gly	Thr	His
			180					185					190		
Ser	Leu	Thr	Glu	Ser	Gly	Ala	Ser	Cys	Leu	Pro	Trp	Asn	Ser	Met	Ile
		195					200					205			
Leu	Ile	Gly	Lys	Val	Tyr	Thr	Ala	Gln	Asn	Pro	Ser	Ala	Gln	Ala	Leu
	210					215					220				
Gly	Leu	Gly	Lys	His	Asn	Tyr	Cys	Arg	Asn	Pro	Asp	Gly	Asp	Ala	Lys
225					230					235					240
Pro	Trp	Cys	His	Val	Leu	Lys	Asn	Arg	Arg	Leu	Thr	Trp	Glu	Tyr	Cys
				245					250					255	
Asp	Val	Pro	Ser	Cys	Ser	Thr	Cys	Gly	Leu	Arg	Gln	Tyr	Ser	Gln	Pro
			260					265					270		
Gln	Phe	Arg	Ile	Lys	Gly	Gly	Leu	Phe	Ala	Asp	Ile	Ala	Ser	His	Pro
		275					280					285			
Trp	Gln	Ala	Ala	Ile	Phe	Ala	Lys	His	Arg	Arg	Ser	Pro	Gly	Glu	Arg
	290					295					300				
Phe	Leu	Cys	Gly	Gly	Ile	Leu	Ile	Ser	Ser	Cys	Trp	Ile	Leu	Ser	Ala
305					310					315					320
Ala	His	Cys	Phe	Gln	Glu	Arg	Phe	Pro	Pro	His	His	Leu	Thr	Val	Ile
				325					330					335	

Leu Gly Arg Thr Tyr Arg Val Val Pro Gly Glu Glu Glu Gln Lys Phe  
 340 345 350  
 Glu Val Glu Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr  
 355 360 365  
 Asp Asn Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys  
 370 375 380  
 Ala Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp  
 385 390 395 400  
 Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly Lys  
 405 410 415  
 His Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Lys Glu Ala His  
 420 425 430  
 Val Arg Leu Tyr Pro Ser Ser Arg Cys Thr Ser Gln His Leu Leu Asn  
 435 440 445  
 Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp Thr Arg Ser Gly  
 450 455 460  
 Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp Ser Gly Gly  
 465 470 475 480  
 Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val Gly Ile Ile  
 485 490 495  
 Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly Val Tyr Thr  
 500 505 510  
 Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met Arg Pro  
 515 520 525

<210> 52  
 <211> 1947  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> CR1

<400> 52  
 Gln Cys Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn Leu  
 1 5 10 15  
 Thr Asp Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu Cys  
 20 25 30  
 Arg Pro Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys Asn  
 35 40 45  
 Ser Val Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys Arg  
 50 55 60

Asn	Pro	Pro	Asp	Pro	Val	Asn	Gly	Met	Val	His	Val	Ile	Lys	Gly	Ile	65	70	75	80
Gln	Phe	Gly	Ser	Gln	Ile	Lys	Tyr	Ser	Cys	Thr	Lys	Gly	Tyr	Arg	Leu	85	90	95	
Ile	Gly	Ser	Ser	Ser	Ala	Thr	Cys	Ile	Ile	Ser	Gly	Asp	Thr	Val	Ile	100	105	110	
Trp	Asp	Asn	Glu	Thr	Pro	Ile	Cys	Asp	Arg	Ile	Pro	Cys	Gly	Leu	Pro	115	120	125	
Pro	Thr	Ile	Thr	Asn	Gly	Asp	Phe	Ile	Ser	Thr	Asn	Arg	Glu	Asn	Phe	130	135	140	
His	Tyr	Gly	Ser	Val	Val	Thr	Tyr	Arg	Cys	Asn	Pro	Gly	Ser	Gly	Gly	145	150	155	160
Arg	Lys	Val	Phe	Glu	Leu	Val	Gly	Glu	Pro	Ser	Ile	Tyr	Cys	Thr	Ser	165	170	175	
Asn	Asp	Asp	Gln	Val	Gly	Ile	Trp	Ser	Gly	Pro	Ala	Pro	Gln	Cys	Ile	180	185	190	
Ile	Pro	Asn	Lys	Cys	Thr	Pro	Pro	Asn	Val	Glu	Asn	Gly	Ile	Leu	Val	195	200	205	
Ser	Asp	Asn	Arg	Ser	Leu	Phe	Ser	Leu	Asn	Glu	Val	Val	Glu	Phe	Arg	210	215	220	
Cys	Gln	Pro	Gly	Phe	Val	Met	Lys	Gly	Pro	Arg	Arg	Val	Lys	Cys	Gln	225	230	235	240
Ala	Leu	Asn	Lys	Trp	Glu	Pro	Glu	Leu	Pro	Ser	Cys	Ser	Arg	Val	Cys	245	250	255	
Gln	Pro	Pro	Pro	Asp	Val	Leu	His	Ala	Glu	Arg	Thr	Gln	Arg	Asp	Lys	260	265	270	
Asp	Asn	Phe	Ser	Pro	Gly	Gln	Glu	Val	Phe	Tyr	Ser	Cys	Glu	Pro	Gly	275	280	285	
Tyr	Asp	Leu	Arg	Gly	Ala	Ala	Ser	Met	Arg	Cys	Thr	Pro	Gln	Gly	Asp	290	295	300	
Trp	Ser	Pro	Ala	Ala	Pro	Thr	Cys	Glu	Val	Lys	Ser	Cys	Asp	Asp	Phe	305	310	315	320
Met	Gly	Gln	Leu	Leu	Asn	Gly	Arg	Val	Leu	Phe	Pro	Val	Asn	Leu	Gln	325	330	335	
Leu	Gly	Ala	Lys	Val	Asp	Phe	Val	Cys	Asp	Glu	Gly	Phe	Gln	Leu	Lys	340	345	350	
Gly	Ser	Ser	Ala	Ser	Tyr	Cys	Val	Leu	Ala	Gly	Met	Glu	Ser	Leu	Trp	355	360	365	

Asn Ser Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro  
 370 375 380  
 Val Ile Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro  
 385 390 395 400  
 Phe Gly Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly  
 405 410 415  
 Thr Ser Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp  
 420 425 430  
 Pro Gln Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile  
 435 440 445  
 Leu Gly His Cys Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys  
 450 455 460  
 Thr Gln Thr Asn Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr  
 465 470 475 480  
 Glu Cys Arg Pro Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu  
 485 490 495  
 Asp Asn Leu Val Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser  
 500 505 510  
 Cys Lys Thr Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr  
 515 520 525  
 Asp Ile Gln Val Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His  
 530 535 540  
 Arg Leu Ile Gly His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Ala  
 545 550 555 560  
 Ala His Trp Ser Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly  
 565 570 575  
 Leu Pro Pro Thr Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu  
 580 585 590  
 Asn Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser  
 595 600 605  
 Gly Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys  
 610 615 620  
 Thr Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln  
 625 630 635 640  
 Cys Ile Ile Pro Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile  
 645 650 655  
 Leu Val Ser Asp Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu  
 660 665 670



Phe Arg Cys Gln Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys  
 675 680 685  
 Cys Gln Ala Leu Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg  
 690 695 700  
 Val Cys Gln Pro Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg  
 705 710 715 720  
 Asp Lys Asp Asn Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu  
 725 730 735  
 Pro Gly Tyr Asp Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln  
 740 745 750  
 Gly Asp Trp Ser Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp  
 755 760 765  
 Asp Phe Met Gly Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn  
 770 775 780  
 Leu Gln Leu Gly Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln  
 785 790 795 800  
 Leu Lys Gly Ser Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser  
 805 810 815  
 Leu Trp Asn Ser Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser  
 820 825 830  
 Pro Pro Val Ile Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val  
 835 840 845  
 Phe Pro Phe Gly Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp  
 850 855 860  
 Arg Gly Thr Ser Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr  
 865 870 875 880  
 Ser Asp Pro Gln Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys  
 885 890 895  
 Gly Ile Leu Gly His Cys Gln Ala Pro Asp His Phe Leu Phe Ala Lys  
 900 905 910  
 Leu Lys Thr Gln Thr Asn Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu  
 915 920 925  
 Lys Tyr Glu Cys Arg Pro Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr  
 930 935 940  
 Cys Leu Asp Asn Leu Val Trp Ser Ser Pro Lys Asp Val Cys Lys Arg  
 945 950 955 960  
 Lys Ser Cys Lys Thr Pro Pro Asp Pro Val Asn Gly Met Val His Val  
 965 970 975

Ile Thr Asp Ile Gln Val Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr  
 980 985 990  
 Gly His Arg Leu Ile Gly His Ser Ser Ala Glu Cys Ile Leu Ser Gly  
 995 1000 1005  
 Asn Thr Ala His Trp Ser Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro  
 1010 1015 1020  
 Cys Gly Leu Pro Pro Thr Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn  
 1025 1030 1035 1040  
 Arg Glu Asn Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Leu  
 1045 1050 1055  
 Gly Ser Arg Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile  
 1060 1065 1070  
 Tyr Cys Thr Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala  
 1075 1080 1085  
 Pro Gln Cys Ile Ile Pro Asn Lys Cys Thr Pro Pro Asn Val Glu Asn  
 1090 1095 1100  
 Gly Ile Leu Val Ser Asp Asn Arg Ser Leu Phe Ser Leu Asn Glu Val  
 1105 1110 1115 1120  
 Val Glu Phe Arg Cys Gln Pro Gly Phe Val Met Lys Gly Pro Arg Arg  
 1125 1130 1135  
 Val Lys Cys Gln Ala Leu Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys  
 1140 1145 1150  
 Ser Arg Val Cys Gln Pro Pro Pro Glu Ile Leu His Gly Glu His Thr  
 1155 1160 1165  
 Pro Ser His Gln Asp Asn Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser  
 1170 1175 1180  
 Cys Glu Pro Gly Tyr Asp Leu Arg Gly Ala Ala Ser Leu His Cys Thr  
 1185 1190 1195 1200  
 Pro Gln Gly Asp Trp Ser Pro Glu Ala Pro Arg Cys Ala Val Lys Ser  
 1205 1210 1215  
 Cys Asp Asp Phe Leu Gly Gln Leu Pro His Gly Arg Val Leu Phe Pro  
 1220 1225 1230  
 Leu Asn Leu Gln Leu Gly Ala Lys Val Ser Phe Val Cys Asp Glu Gly  
 1235 1240 1245  
 Phe Arg Leu Lys Gly Ser Ser Val Ser His Cys Val Leu Val Gly Met  
 1250 1255 1260  
 Arg Ser Leu Trp Asn Asn Ser Val Pro Val Cys Glu His Ile Phe Cys  
 1265 1270 1275 1280

Pro Asn Pro Pro Ala Ile Leu Asn Gly Arg His Thr Gly Thr Pro Ser  
 1285 1290 1295  
 Gly Asp Ile Pro Tyr Gly Lys Glu Ile Ser Tyr Thr Cys Asp Pro His  
 1300 1305 1310  
 Pro Asp Arg Gly Met Thr Phe Asn Leu Ile Gly Glu Ser Thr Ile Arg  
 1315 1320 1325  
 Cys Thr Ser Asp Pro His Gly Asn Gly Val Trp Ser Ser Pro Ala Pro  
 1330 1335 1340  
 Arg Cys Glu Leu Ser Val Arg Ala Gly His Cys Lys Thr Pro Glu Gln  
 1345 1350 1355 1360  
 Phe Pro Phe Ala Ser Pro Thr Ile Pro Ile Asn Asp Phe Glu Phe Pro  
 1365 1370 1375  
 Val Gly Thr Ser Leu Asn Tyr Glu Cys Arg Pro Gly Tyr Phe Gly Lys  
 1380 1385 1390  
 Met Phe Ser Ile Ser Cys Leu Glu Asn Leu Val Trp Ser Ser Val Glu  
 1395 1400 1405  
 Asp Asn Cys Arg Arg Lys Ser Cys Gly Pro Pro Pro Glu Pro Phe Asn  
 1410 1415 1420  
 Gly Met Val His Ile Asn Thr Asp Thr Gln Phe Gly Ser Thr Val Asn  
 1425 1430 1435 1440  
 Tyr Ser Cys Asn Glu Gly Phe Arg Leu Ile Gly Ser Pro Ser Thr Thr  
 1445 1450 1455  
 Cys Leu Val Ser Gly Asn Asn Val Thr Trp Asp Lys Lys Ala Pro Ile  
 1460 1465 1470  
 Cys Glu Ile Ile Ser Cys Glu Pro Pro Pro Thr Ile Ser Asn Gly Asp  
 1475 1480 1485  
 Phe Tyr Ser Asn Asn Arg Thr Ser Phe His Asn Gly Thr Val Val Thr  
 1490 1495 1500  
 Tyr Gln Cys His Thr Gly Pro Asp Gly Glu Gln Leu Phe Glu Leu Val  
 1505 1510 1515 1520  
 Gly Glu Arg Ser Ile Tyr Cys Thr Ser Lys Asp Asp Gln Val Gly Val  
 1525 1530 1535  
 Trp Ser Ser Pro Pro Pro Arg Cys Ile Ser Thr Asn Lys Cys Thr Ala  
 1540 1545 1550  
 Pro Glu Val Glu Asn Ala Ile Arg Val Pro Gly Asn Arg Ser Phe Phe  
 1555 1560 1565  
 Ser Leu Thr Glu Ile Ile Arg Phe Arg Cys Gln Pro Gly Phe Val Met  
 1570 1575 1580

Val Gly Ser His Thr Val Gln Cys Gln Thr Asn Gly Arg Trp Gly Pro  
 1585 1590 1595 1600  
 Lys Leu Pro His Cys Ser Arg Val Cys Gln Pro Pro Pro Glu Ile Leu  
 1605 1610 1615  
 His Gly Glu His Thr Leu Ser His Gln Asp Asn Phe Ser Pro Gly Gln  
 1620 1625 1630  
 Glu Val Phe Tyr Ser Cys Glu Pro Ser Tyr Asp Leu Arg Gly Ala Ala  
 1635 1640 1645  
 Ser Leu His Cys Thr Pro Gln Gly Asp Trp Ser Pro Glu Ala Pro Arg  
 1650 1655 1660  
 Cys Thr Val Lys Ser Cys Asp Asp Phe Leu Gly Gln Leu Pro His Gly  
 1665 1670 1675 1680  
 Arg Val Leu Leu Pro Leu Asn Leu Gln Leu Gly Ala Lys Val Ser Phe  
 1685 1690 1695  
 Val Cys Asp Glu Gly Phe Arg Leu Lys Gly Arg Ser Ala Ser His Cys  
 1700 1705 1710  
 Val Leu Ala Gly Met Lys Ala Leu Trp Asn Ser Ser Val Pro Val Cys  
 1715 1720 1725  
 Glu Gln Ile Phe Cys Pro Asn Pro Pro Ala Ile Leu Asn Gly Arg His  
 1730 1735 1740  
 Thr Gly Thr Pro Phe Gly Asp Ile Pro Tyr Gly Lys Glu Ile Ser Tyr  
 1745 1750 1755 1760  
 Ala Cys Asp Thr His Pro Asp Arg Gly Met Thr Phe Asn Leu Ile Gly  
 1765 1770 1775  
 Glu Ser Ser Ile Arg Cys Thr Ser Asp Pro Gln Gly Asn Gly Val Trp  
 1780 1785 1790  
 Ser Ser Pro Ala Pro Arg Cys Glu Leu Ser Val Pro Ala Ala Cys Pro  
 1795 1800 1805  
 His Pro Pro Lys Ile Gln Asn Gly His Tyr Ile Gly Gly His Val Ser  
 1810 1815 1820  
 Leu Tyr Leu Pro Gly Met Thr Ile Ser Tyr Thr Cys Asp Pro Gly Tyr  
 1825 1830 1835 1840  
 Leu Leu Val Gly Lys Gly Phe Ile Phe Cys Thr Asp Gln Gly Ile Trp  
 1845 1850 1855  
 Ser Gln Leu Asp His Tyr Cys Lys Glu Val Asn Cys Ser Phe Pro Leu  
 1860 1865 1870  
 Phe Met Asn Gly Ile Ser Lys Glu Leu Glu Met Lys Lys Val Tyr His  
 1875 1880 1885

Tyr Gly Asp Tyr Val Thr Leu Lys Cys Glu Asp Gly Tyr Thr Leu Glu  
 1890 1895 1900

Gly Ser Pro Trp Ser Gln Cys Gln Ala Asp Asp Arg Trp Asp Pro Pro  
 1905 1910 1915 1920

Leu Ala Lys Cys Thr Ser Arg Ala His Cys Cys Asp Gly Pro Lys Lys  
 1925 1930 1935

Lys Lys Lys Lys Ser Pro Ser Lys Ser Ser Gly  
 1940 1945

<210> 53

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> this peptide may encompass 3-10 residues according to  
 the specification as filed

<400> 53

Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 1 5 10